

DETAILED ACTION

1. This communication is in response to applicant's response filed under 37 C.F.R. §1.111 in response to a non-final office action. Claims 1, 4, 6-8, 11, 12 and 19 have been amended and claims 3, 5, 13-18 and 20 have been canceled. Claims 1, 2, 4, 6-12 and 19 are subject to examination.

2. Acknowledgment is made to applicant's amendment to the abstract and specification regarding hyperlinks to obviate previous objection to the specification. Previously raised objections to the abstract and specification regarding hyperlinks are hereby withdrawn.

3. Acknowledgment is made to applicant's amendment to claim 1 to obviate previous objection to claim 1. Previously raised objection to claim 1 is hereby withdrawn.

4. Acknowledgment is made of applicant's specification page 12, lines 15-16 to show support for claim 2 to obviate previous 35 U.S.C. 112 rejection 1st and 2nd Paragraphs and objection to the specification. Previously raised 35 U.S.C. 112 rejection 1st and 2nd Paragraphs and objection to the specification to claim 2 is hereby withdrawn.

Art Unit: 2446

5. Acknowledgment is made to applicant's amendment to claims 8 and 11 to obviate previous 35 U.S.C. 112 rejection 2nd Paragraph. Previously raised 35 U.S.C. 112 rejection 2nd Paragraph of claims 8 and 11 are hereby withdrawn.

Response to Arguments

6. Applicant's arguments filed 07/07/2009 have been fully considered but they are not persuasive for the following reasons:

7. **Applicant's Argument:**

Applicant argues in substance that "The combination of Morillon and Hillyard fails to teach or suggest at least the above- quoted features of amended Claim 1.

Morillon describes a hands-free access and/or engine starting system. At column 3, line 58, to column 4, line 59, Morillon describes that, when a user is detected through a contactor and authenticated, the user command is executed. However, Morillon does not teach or suggest an approach detector "configured to detect that said portable information terminal or a user thereof has approached within a predetermined distance" and that the operation apparatus conducts the predetermined operation "when said first authentication is successful, said control command reception unit receives said control command, and the approach detector detects that said portable information terminal has approached within said predetermined distance," as recited by amended Claim 1. Instead, in Morillon, when a command is received and a user is authenticated, the

Art Unit: 2446

command is executed without additionally detecting a distance between the user and the car to determine if the distance is within a predetermined distance.”

8. **Examiner’s Response:**

The examiner respectfully disagrees. The examiner submits that the combination of Morillon and Hillyard does teach the recited features of amended claim 1. Morillon teaches the detection of an authorized identifier 3 when the user approaches the vehicle and pulls on the handle 7. It further teaches that the distance is detected between the vehicle and the authorized identifier 3 using the zone coverage. If the identifier is not within that zone, meaning if the distance is not within the predetermined zone Z2, then the authentication and transmitting of the commands cannot take place (Morillon; Col 3, Lines 58 – Col 4, Lines 7). Even further, the combination of Hillyard teaches that it is obvious to have devices to be found and authentication performed on devices that are within a predetermined distance of each other (Hillyard; Par. 0026). The claims merely recite "an approach detector" of which both Morillon and Hillyard teaches. Morillon teaches an approach detector once the user pulls on the handle (user intervention) and Hillyard teaches an approach detector by being within proximity of each other (automatically). The applicant further asserts that no distance detection between the user and the car is determined, but examiner points to Col 3, Lines 62-66, where teaches that a signal is emitted to provide a coverage zone, and only if the identifier is within this coverage zone can the authentication and transmitting of commands take place, thereby teaching the distance detecting limitation.

9. Regarding all other arguments presented by applicant, the arguments are substantially the same as those which have already been addressed above and in the interest of brevity; the examiner directs the applicant to those responses above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1, 2, 4, 6, 10-12, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morillon et al (Morillon hereafter)** (US 6,522,027 B1) in view of **Hillyard** (US 2003/0027526 A1).

Regarding claims 1 and 19, Morillon teaches, an authentication processing system, comprising:

a portable information terminal; **(identifier; 3 of Fig. 1, Col 3, Lines 33-47)**

a terminal authentication apparatus which conducts authentication processing by air; **(the authentication means preferably include a low frequency transmitter and a radiofrequency receiver to enable data interchange over a certain distance with one or more identifiers, Col 3, Lines 33-47)** and

Art Unit: 2446

an operation apparatus (**electronic unit 1**) which conducts a predetermined operation (**unlocks the doors**) when said terminal authentication apparatus has succeeded in authentication with said portable information terminal, **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)**

a first authentication unit configured to conduct a first authentication with said terminal authentication apparatus through said wireless link, **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)**

a second authentication unit configured to conduct said first authentication with said portable information terminal through said wireless link; **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)** and

a control command transmission unit configured to transmit a control command for said operation apparatus when said first and second authentication units succeed in said first authentication, **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)**

wherein said operation apparatus includes:

a control command reception unit configured to receive said control command; **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)** and

an operation conduction unit configured to conduct said predetermined operation based on said control command, **(if the identifier is authenticated, the electronic unit 1 then unlocks the doors 4, 5 and the trunk lid 6, Col 3, Line 58 - Col 4, Line 7)**

wherein at least one of said portable information terminal and said terminal authentication apparatus has a distance detection unit configured to detect a distance between said portable information terminal and said terminal authentication apparatus; **(Col 3, Line 58 - Col 4, Line 17)**

said control command transmission unit transmits said control command to said operation apparatus when said first authentication is succeeded and the distance between said portable information terminal and said terminal authentication apparatus is equal to or less than a prescribed value. **(Col 3, Line 58 - Col 4, Line 17)**

said operation apparatus comprises an approach detector configured to detect that said portable information terminal or a user thereof has approached within a predetermined distance; **(Col 3, Line 58 - Col 4, Line 17)** and

said operation apparatus conducts said predetermined operation when said first authentication is successful, said control command reception unit receives said control command, and the approach detector detects that said portable information terminal has approached within said predetermined distance. **(Col 3, Line 58 - Col 4, Line 17)**

Morillon fails to explicitly teach,

wherein said portable information terminal includes:

an existence confirmation signal transmission unit configured to transmit an existence confirmation signal to confirm whether or not said terminal authentication apparatus exists, at a first time interval;

an existence notice signal reception unit configured to receive an existence notice signal transmitted from said terminal authentication apparatus in response to said existence confirmation signal;

a first link connection unit configured to establish a wireless link with said terminal authentication apparatus which has transmitted said existence notice signal when said existence notice signal is received; and

wherein said terminal authentication apparatus includes:

an existence confirmation signal transmission unit set to a reception mode capable of receiving said existence confirmation signal at a second time interval only during a third time interval equal to or longer than said first time interval;

an existence notice signal reception unit configured to transmit said existence notice signal serving as response of said existence confirmation signal to said portable information terminal when said existence confirmation signal is received;

a second link connection unit configured to establish a wireless link with said portable information terminal after said portable information terminal receives said existence notice signal;

However, **Hillyard** teaches,

wherein said portable information terminal includes:

an existence confirmation signal transmission unit configured to transmit an existence confirmation signal to confirm whether or not said terminal authentication apparatus exists, at a first time interval; **(device A performs fixed-duration inquiry 402C during a first period have a duration of 6.8 seconds, Par. 0050)**

an existence notice signal reception unit configured to receive an existence notice signal transmitted from said terminal authentication apparatus in response to said existence confirmation signal **(device B responds with its device address. device A can then page Device B using Device B's address, Par. 0051)**

a first link connection unit configured to establish a wireless link with said terminal authentication apparatus which has transmitted said existence notice signal when said existence notice signal is received; **(Par. 0032)** and

wherein said terminal authentication apparatus includes:

an existence confirmation signal transmission unit set to a reception mode capable of receiving said existence confirmation signal at a second time interval only during a third time interval equal to or longer than said first time interval; **(device B could receive inquiry 402D from device A, Par. 0051; Fig. 6, Par. 0050-0053)**

an existence notice signal reception unit configured to transmit said existence notice signal serving as response of said existence confirmation signal to said portable information terminal when said existence confirmation signal is received; **(device B responds with its device address, Par. 0051)**

a second link connection unit configured to establish a wireless link with said portable information terminal after said portable information terminal receives said existence notice signal; **(Par. 0032)**

said operation apparatus comprises an approach detector configured to detect that said portable information terminal or a user thereof has approached within a predetermined distance; **(Par. 0026)**

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Morillon** to include the above limitations as taught by **Hillyard** in order to use Bluetooth communication for the advantage of reducing interference between other devices (Par. 0007).

Regarding claim 2, Morillon - Hillyard teaches,

wherein radio wave arrival ranges of said existence confirmation signal and said existence notice signal are longer than a distance obtained by multiplying a sum of said first and second time intervals by an average moving speed of said portable information terminal. **(Morillon; Col 3, Line 58 - Col 4, Line 7)**

[Morillon teaches, in Col 3, Line 58 - Col 4, Line 7, the signal being emitted at different power levels to form zones. These different zones determine what operation takes place upon successful authorization.]

Regarding claim 4, Morillon - Hillyard teaches,

Art Unit: 2446

wherein said distance detection unit detects the distance based on field intensity of radio wave transmitted between said portable information terminal and said terminal authentication apparatus. **(Morillon; power of this signal; Col 3, Line 58 - Col 4, Line 17)**

Regarding claim 6, Morillon – Hillyard teaches,

wherein said approach detector is a contact detection sensor which detects that the user of said portable information terminal has contacted said terminal authentication apparatus or said authentication operation conduction apparatus. **(Morillon; pulls on the handle; Col 3, Line 58 - Col 4, Line 17)**

Regarding claim 10, Morillon - Hillyard teaches,

wherein said portable information terminal has a third authentication unit configured to conduct a second authentication with said terminal authentication apparatus after said terminal authentication apparatus has transmitted said control command to said operation apparatus; **(Morillon; Col 4, Lines 8-7)** and

said terminal authentication apparatus has a fourth authentication unit configured to conduct said second authentication with said portable information terminal after transmitting said control command to said operation apparatus. **(Morillon; Col 4, Lines 8-7)**

[Morillon teaches, in (Col 4, Lines 8-7), that a second authentication is done between the electronic unit 1 and the identifier 3 once the passenger is in the car to determine if the user is authorized to start the engine.]

Regarding claim 11, Morillon teaches,

said second authentication is an authentication by an authentication protocol in a rank higher than a link of Bluetooth. **(the authentication means preferably include a low frequency transmitter and a radiofrequency receiver to enable data interchange over a certain distance with one or more identifiers, Col 3, Lines 33-47)**

Morillon fails to explicitly teach,

wherein said first authentication is a link authentication of Bluetooth;

However, **Hillyard** teaches,

wherein said first authentication is a link authentication of Bluetooth; **(Par. 005-0014)**

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Morillon** to include the above limitations as taught by **Hillyard** in order to use Bluetooth communication for the advantage of reducing interference between other devices (Par. 0007).

Regarding claim 12, Morillon - Hillyard teaches,

wherein said predetermined operation is to lock and unlock a door of a vehicle.

(Morillon; Col 3, Lines 48-54)

12. **Claims 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Morillon** in view of **Hillyard** in further view of **Tada** (US 2001/0019956 A1)

Regarding claim 7, Morillon and Hillyard teaches,

that said third time interval is longer than said first time interval. **(Hillyard; Fig. 6; Par. 0050-0053)**

Morillon and Hillyard fails to explicitly teach,

wherein at least one of said portable information terminal and said terminal authentication apparatus has an interval controller which controls at least one of said first, second and third time intervals.

However, **Tada** teaches,

wherein at least one of said portable information terminal and said terminal authentication apparatus has an interval controller which controls at least one of said first, second and third time intervals. **(Par. 0106)**

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Morillon and Hillyard** to include the above limitations as taught by **Tada** in order to adjust the time intervals based on the battery residual capacity (Par. 0106).

Regarding claim 8, Morillon and Hillyard teaches,

that said first and second time intervals are equal to each other, or said third time interval is longer than said first time interval. **(Hillyard; Fig. 6; Par. 0050-0053)**

Morillon and Hillyard fails to explicitly teach,

wherein at least one of said portable information terminal and said terminal authentication apparatus has a battery monitor which detects remaining electric capacity of a battery; and

said interval controller controls at least one of said first, second and third time intervals, in accordance with the remaining electric capacity of the battery detected by said battery monitor.

However, **Tada** teaches,

wherein at least one of said portable information terminal and said terminal authentication apparatus has a battery monitor which detects remaining electric capacity of a battery; (Par. 0106) and

said interval controller controls at least one of said first, second and third time intervals, in accordance with the remaining electric capacity of the battery detected by said battery monitor. **(Par. 0106)**

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Morillon and Hillyard** to include the above limitations as taught by **Tada** in order to adjust the time intervals based on the battery residual capacity (Par. 0106).

Art Unit: 2446

Regarding claim 9, Morillon and Hillyard teaches,

that said first and second time intervals are equal to each other, or said third time interval is longer than said first time interval. **(Hillyard; Fig. 6; Par. 0050-0053)**

Morillon and Hillyard fails to explicitly teach,

wherein at least one of said portable information terminal and said terminal authentication apparatus has a time measurement unit configured to measure a time elapsed from when it became impossible to detect a communication partner, or a time elapsed from when the wireless link with said terminal authentication apparatus is cut off; and

said interval controller controls at least one of said first, second and third time intervals.

However, **Tada** teaches,

wherein at least one of said portable information terminal and said terminal authentication apparatus has a time measurement unit configured to measure a time elapsed from when it became impossible to detect a communication partner, (Par. 0084-0093) and

said interval controller controls at least one of said first, second and third time intervals. **(Par. 0106)**

[Examiner interprets optimization being performed on the basis of a traffic state as a time condition being unable to detect a communication partner which causes resources to be wasted. As a result the interval times are adjusted in order to prevent waste of resources.]

It would have been obvious to one of ordinary skilled in the art at the time of the invention to create the invention of **Morillon** and **Hillyard** to include the above limitations as taught by **Tada** in order to prevent a waste of resources (Par. 0085).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOEL BEHARRY whose telephone number is (571)270-5630. The examiner can normally be reached on M-TH 10-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2446

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. B./

Examiner, Art Unit 2446

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2446